IN THE CLAIMS

Please amend the claims as follows:

1. (original) An analogue signal processor, comprising an audio input signal, an output for providing a processed audio output signal, and a tone control circuit coupling the input and the output and comprising first and second log-domain filters having different low-pass bands and a subtractor for subtracting the output currents of the filters to produce a filtered signal, each of the filters comprising MOS transistors operating in weak inversion.

2. (original) A processor according to claim 1, further comprising a compressor coupling the input to the tone control circuit for compressing the dynamic range of the input signal.

3. (previously presented) A processor according to claim 2, wherein the compressor is a voltage-to-current converter.

4. (previously presented) A processor according to claim 2, wherein the compressor comprises MOS transistors operating in weak inversion.

5. (original) A processor according to claim 4 wherein the compressor is configured to provide control of sensitivity.

6. (previously presented) A processor according to claim 1, further comprising an amplifier for amplifying the filtered output signal of the tone control circuit.

7. (previously presented) A processor according to claim 1, wherein the input signal is current signal.

8. (previously presented) A processor according to claim 1, further comprising a biphase signal generator for supplying to the output a biphase signal modulated by the processed audio output signal.

9. (previously presented) A processor according to claim 1, further comprising full-wave rectification means for full-wave rectifying the processed audio output signal.

10. (original) A processor according to claim 9, wherein the tone control circuit further comprises third and fourth filters having low-pass bands substantially identical to the first and second filters respectively

and a further subtractor for subtracting the output currents of the third and fourth filters to produce a further filtered signal, and the full-wave rectification means comprises means coupled to the input for producing oppositely-phased audio signals from the input signal, one of the oppositely-phased audio signals being supplied to the first and second filters and the other of the oppositely-phased audio signals being supplied to the third and fourth filters, half-wave rectification means for half-wave rectifying the filtered signals from the first mentioned and further subtractors, and a combiner for combining the half-wave rectified signals to effect full-wave rectification.

11. (original) A processor according to claim 10, wherein the third and fourth filters are log-domain filters comprising MOS transistors operating in weak inversion.

12. (previously presented) A processor according to claim 10, wherein the half-wave rectification means comprises means for applying a dc offset to the filtered signals.

13. (previously presented) A processor according to claim 1, comprising only one output.

14. (previously presented) A processor according to claim 1 comprising a plurality of outputs for providing processed audio signals, and wherein the tone control circuit is common to all the outputs for simultaneously adjusting the intensity/frequency of the processed audio signals at the outputs.

15. (original) A processor according to claim 14, further comprising frequency separation means for separating the intensity/frequency adjusted audio signal into a plurality of frequency-separated signals having different frequency bands.

16. (original) A processor decodes to claim 12, wherein the compressor provides control of sensitivity.

17. (original) A processor according to claim 16, wherein the band-pass filters are log-domain filters comprising MOS transistors operating in weak inversion.

18. (previously presented) A processor according to claim 15 further comprising a plurality of biphase signal generators for supplying biphase signals modulated by respective ones of the frequency-separated signals to respective ones of the outputs.

19. (original) A processor according to claim 18, further comprising sampling means for applying samples of the frequency-separated signals to the respective biphase signal generators.

20. (original) A processor according to claim 19, wherein the sampling means comprises a continuous interleaved sample generator.

21. (currently amended) A processor according to claim 1, where configured such that the intensity/frequency response of the tone control circuit is controllable by a user.

22. (original) A processor according to claim 21, comprising means controllable by the user for adjusting the frequency response of the tone control circuit.

23. (currently amended) A processor according to claim 22, comprising user controls for controlling ~~bass~~ base cut/boost and treble cut/boost.

24. (previously presented) A processor according to claim 21, comprising a user control for controlling signal amplitude.

25. (previously presented) A processor according to claim 1, wherein the or each subtractor has a control input for controlling signal amplitude.

26. (previously presented) A processor according to claim 1, when implemented as a single chip analogue MOS integrated circuit.

27. (previously presented) An aural prosthetic device comprising the processor according to claim 1.

28. (previously presented) A hearing aid comprising the processor according to claim 1.

29. (previously presented) A cochlear implant prosthesis comprising the processor according to claim 1.

30. (currently amended) A multi-channel analogue audio signal processor for use with a cochlear prosthesis, comprising:

an input for receiving an audio signal;

a plurality of outputs for connection to respective ones of cochlear implant electrodes;

a plurality of analogue signal processing channels coupled to the input, each channel comprising a log-domain filter comprising MOS transistors operating in weak inversion and being coupled to a respective one of the outputs; ~~and~~

a tone generator for generating tones of preset amplitude and frequency dependent on the fundamental frequencies of the filters of the channels; and

adjustment means for adjusting the intensity/frequency response of each channel.

31. (original) A processor according to claim 30, wherein each channel further comprises an amplifier having a controllable gain, the gain of which amplifier is adjustable by the adjustment means.

32. (previously presented) A processor according to claim 30, wherein the adjustment means includes a control interface for allowing adjustment of the gain of each channel in response to control signals transmitted by a wireless remote control.

33. (cancelled)

34. (currently amended) A processor according to claim ~~33~~ 32, further comprising tone generator control means for selecting the frequency of the tone produced by the tone generator.

35. (original) A processor according to claim 34, wherein the tone generator control means comprises a wireless remote control.

36. (previously presented) A processor according to claim 30, where configured such that each channel is adjustable independently of all the other channels.

37. (previously presented) A processor according to claim 30, further comprising sampling means coupling the channels to the outputs.

38. (original) A processor according to claim 37, wherein the sampling means comprises a continuous interleaved sample generator.

39. (previously presented) A processor according to claim 30, further comprising a plurality of biphase signal generators for supplying to the outputs biphase signals modulated by the output signals of the channels.

40. (new) An analogue signal processor, comprising

an audio input signal,

an output for providing a processed audio output signal;

a tone control circuit coupling the input and the output and comprising first and second log-domain filters having different low-pass bands and a subtractor for subtracting the output currents of the

filters to produce a filtered signal, each of the filters comprising MOS transistors operating in weak inversion; and

a full-wave rectification means for full-wave rectifying the processed audio output signal

wherein the tone control circuit further comprises third and fourth filters having low-pass bands substantially identical to the first and second filters respectively and a further subtractor for subtracting the output currents of the third and fourth filters to produce a further filtered signal, and the full-wave rectification means comprises means coupled to the input for producing oppositely-phased audio signals from the input signal, one of the oppositely-phased audio signals being supplied to the first and second filters and the other of the oppositely-phased audio signals being supplied to the third and fourth filters, half-wave rectification means for half-wave rectifying the filtered signals from the first mentioned and further subtractors, and a combiner for combining the half-wave rectified signals to effect full-wave rectification.